

United States Patent [19]

Ashmead et al.

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[54] **EFFERVESCENT VITAMIN-MINERAL
GRANULE PREPARATION**

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[58] Field of Search 424/44, 280

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,241,977	3/1966	Mitchell et al.	424/44
3,773,922	11/1973	Gergely	424/44
4,020,158	4/1977	Ashmead et al.	424/294
4,265,874	5/1981	Bonsen et al.	424/44
4,322,407	3/1982	Ko	424/280
4,436,720	3/1984	Pakhomov et al.	424/44

FOREIGN PATENT DOCUMENTS

46-4758 5/1971 Japan 424/44

OTHER PUBLICATIONS

Chem. Abst. 80:52373(v) (1974)—Cruceanu et al.

Chem. Abst. 89 30826d (1978)—Tokes et al.

Chem. Abst. 90 76545k (1979)—Rafjnski et al.

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[57] **ABSTRACT**

Flavored, effervescent, water soluble compositions containing water-soluble and oil-soluble vitamins and amino acid chelated minerals in bioavailable form are contained in a composition consisting of 20–30% of a vitamin blend consisting of water-soluble and oil-soluble vitamins adsorbed on a lactose carrier containing a minor amount of propylene glycol, 5–25% of one or more amino acid chelated minerals selected from the group consisting of calcium, magnesium, iron, zinc, copper and manganese, 20–45% citric acid, 5–25% of one or more alkali or alkaline earth metal bicarbonates or carbonates, 1–5% flavoring agent, 0.5–2% of a sweetening agent and sufficient additional lactose carrier to provide the desired vitamin and mineral content per unit dosage which will normally vary between about 2 and 6 grams. When dissolved in water a flavored, lightly carbonated drink is provided which will contain in soluble bioavailable form between about 50 to 100% of the U.S. RDA of one or more vitamins contained in a dosage unit of the composition and between about 20 to 50% of the U.S. RDA of one or more of the trace minerals iron, zinc, copper and magnesium as contained in a unit dosage of the composition as amino acid chelates. Separate effervescent vitamin compositions without minerals and mineral compositions without vitamins are also disclosed.

13 Claims, No Drawings